

**IN THE UNITED STATES DISTRICT COURT FOR THE  
EASTERN DISTRICT OF VIRGINIA  
Alexandria Division**

BRUNSWICK CORPORATION, )  
Plaintiff, )  
                        )  
v.                     )      **Civil Action No. 1:22-cv-00108**  
                        )  
VOLVO PENTA OF THE AMERICAS, LLC, )  
Defendant.             )

**MEMORANDUM OPINION**

At issue in this patent infringement case is Defendant's threshold Motion to Dismiss, arguing that Claim 1—the sole claim asserted in the Complaint—of each of the five allegedly infringed patents is directed to patent-ineligible subject matter under 35 U.S.C. § 101 and *Alice Corp. Pts. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014). Specifically, defendant contends that each of the relevant claims in the five patents at issue (i) are directed to a patent-ineligible abstract idea; and (ii) contain no “inventive concept” sufficient to “transform” the claimed abstract idea into a patent-eligible application. *Alice*, 573 U.S. at 221. Plaintiff opposes the Motion to Dismiss, arguing that the patents (i) are not directed to abstract ideas and, in any event, (ii) contain inventive concepts that are sufficient transform the claims into patent-eligible subject matter. The matter has now been fully briefed and argued orally on two occasions by the parties. For the reasons stated herein, the Motion to Dismiss must be granted.

**I.**

To begin with, it is appropriate to describe generally each of the five patents and the single claim at issue in each. The five patents held by plaintiff are:

- (1) U.S. Patent No. 7,305,928 (hereinafter the “‘928 Patent”), titled “Method for positioning a marine vessel”;

- (2) U.S. Patent No. 7,727,036 (hereinafter the “‘036 Patent”), titled “System and method for controlling movement of a marine vessel”;
- (3) U.S. Patent No. 10,095,232 (hereinafter the “‘232 Patent”), titled “Station keeping methods”;
- (4) U.S. Patent No. 10,324,468 (hereinafter the “‘468 Patent”), titled “System and method for controlling a position of a marine vessel near an object”; and
- (5) U.S. Patent No. 10,671,073 (hereinafter the “‘073 Patent”), titled “Station keeping system and method.”

#### A. The ’928 Patent

As the specification of the ’928 Patent notes, the ’928 Patent, titled a “method for positioning a marine vessel,” is directed to a “method for positioning a marine vessel and, more particularly, a method for maintaining the position of a marine vessel at a selected global position.” ’928 Patent, col. 1, ll. 1-18. Thus, Claim 1 of the ’928 Patent, the only claim in the ’928 Patent asserted against the defendant, is solely a method claim; it makes no claim to any novel device, instrumentality, or apparatus and instead claims only a method that incorporates prior-art devices, instrumentalities, and apparatuses for the purpose or goal of maintaining the position and heading of a marine vessel. Claim 1, set forth in its entirety in the footnote below,<sup>1</sup>

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<sup>1</sup> The full text of Claim 1 of the ’928 Patent is:

“A method for maintaining a marine vessel in a selected position, comprising the steps of:<sup>1</sup>

- a) “providing a first marine propulsion device which is rotatable about a first steering axis;”
- b) “providing a second marine propulsion device which is rotatable about a second steering axis;”
- c) “determining a current global position of said marine vessel;”
- d) “determining a current heading of said marine vessel;”
- e) “receiving a signal command to maintain the current global position and the current heading of said marine vessel;”
- f) “storing said current global position and heading of said marine vessel as a target global position and a target heading in response to receiving said signal command;”
- g) “determining a subsequent global position of said marine vessel;”
- h) “determining a subsequent heading of said marine vessel;”
- i) “calculating a position error difference between said subsequent global position and said target global position;”
- j) “calculating a heading error difference between said subsequent heading and said target heading;”
- k) “determining required marine vessel movements to minimize said position error difference and said heading error difference;”
- l) “resolving said required marine vessel movements into a target linear thrust and a target moment about a preselected point of said marine vessel;”

consists of sixteen elements which can be summarized in plain language as follows:

- The first and second claim elements simply recite the necessity for the use of prior art marine propulsion devices which are rotatable around steering axes.
- The third and fourth claim elements recite the requirement for determining the current global position and heading of the marine vessel.
- The fifth and sixth claim elements recite the necessary steps of receiving a command to maintain the vessel at its global position and heading and storing that information as a target global position and heading.
- The seventh and eighth claim elements list the requirement of determining the new current position and heading of the vessel.
- The ninth and tenth claim elements recite the necessary step of determining the difference or error between the target and new current positions and headings of the vessel.
- The eleventh and twelfth claim elements recite the requirement for determining the vessel movements needed to correct that error to return the vessel to its target position and heading.
- The thirteenth, fourteenth, and fifteenth claim elements list the requirement of operating the vessel's propulsion devices to effectuate those vessel movements, thereby correcting the error or difference between the current and target positions and headings by returning the vessel to the target position and heading.
- The sixteenth claim element simply recites the necessity of a generic, prior-art, manually operable control device, such as a joystick, whereby a captain or boat operator can communicate a desire to maintain the boat at a fixed position and heading.

'928 Patent, col. 21, 1.42-col. 22, 1. 27.

In essence, therefore, Claim 1 of the '928 Patent simply describes a method for determining the difference between the actual and target global positions and headings of a

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- m) "determining a first rotational position of said first marine propulsion device about said first steering axis, a second rotational position of said second marine propulsion device about said second steering axis, a first magnitude and first direction of thrust for said first marine propulsion device, and a second magnitude and second direction of thrust for said second marine propulsion device which will result in achievement of said target linear thrust and said target moment about said preselected point of said marine vessel;"
- n) "rotating said first and second marine propulsion devices to said first and second rotational positions about said first and second steering axes, respectively;"
- o) "causing said first and second marine propulsion devices to produce said first and second magnitudes and directions of thrust, respectively; and"
- p) "providing a manually operable control device which is configured to provide an output signal which is representative of a desired movement of said marine vessel, said signal command receiving step being performed only upon an initial change from activity to inactivity of said manually operable control device."

vessel, and then for correcting that difference to return the vessel to its target global position and heading. Notably, Claim 1 of the '928 Patent does not rely on any novel device, instrumentality, or apparatus to accomplish the purpose of the Claim; instead, Claim 1 of the '928 Patent calls for the use of prior art devices, instrumentalities, and apparatuses—propulsion devices and a manually operable control device—to accomplish the purpose of the Claim.

## B. The '036 Patent

As the specification of the '036 Patent notes, the '036 Patent, titled a “system and method for controlling movement of a marine vessel,” is directed to “movement and coordination control of a marine vessel and, more particularly to improved systems and methods for damping unwanted motions of the marine vessel about or along an axis.” '036 Patent, col. 1, ll. 1-10. Like Claim 1 of the '928 Patent, Claim 1 of the '036 Patent is the sole claim asserted against the defendant and makes no claim to any novel device, sensor or controller; instead, it claims only a system<sup>2</sup> that incorporates prior-art devices, sensors, and controllers for the purpose or goal of reducing unwanted movements of the marine vessel.

To that end, Claim 1, set forth in its entirety in the footnote below,<sup>3</sup> consists of five elements that can be summarized in plain language free from patent-ese as follows:

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<sup>2</sup> The difference between a system claim and a method claim is one of framing. Thus, here, as is the case frequently, “the system claim[ is] no different from [a] method claim[] in substance.” *Alice*, 573 U.S. at 226.

<sup>3</sup> “A system for controlling movement of a marine vessel, the system comprising:”

- a) “a operator controllable device having an output that is representative of a operator-desired rate of position change of the vessel about or along an axis;”
- b) “a sensor having an output that is representative of a sensed actual rate of position change of the vessel about or along the axis;”
- c) “a rate of position change controller outputting a rate of position change command based upon the difference between the desired rate of position change and the sensed actual rate of position change; and”
- d) “a vessel coordination controller controlling movement of the vessel based upon the rate of position change command;”
- e) “wherein the rate of position change controller is configured to interpret a lack of movement of the operator controllable device to be a request for active suppression of position change rather than as a request for no position change.”

- The first claim element simply recites the necessity for the use of a generic, prior-art device, such as a joystick, whereby a vessel operator can communicate desired vessel movements to a device like a prior-art, generic control module.
- The second claim element merely recites the necessity for the use of a generic, prior-art sensor to sense the actual rate of the vessel's movements.
- The third claim element recites the requirement of a controller known in the art that outputs a rate of position change command based upon the difference between the vessel operator's desired movement, as evidenced by the joystick in the first element, and the vessel's actual movement, as evidenced by the sensor in the second element.
- The fourth claim element recites a controller known in the art that causes the vessel to move based upon the rate of position change command outputted in the third claim element.
- The fifth claim element simply recites the requirement that a lack of movement in the joystick is to be interpreted as a request by the vessel operator to maintain the vessel in its current position, rather than to allow the vessel to drift.

'036 Patent, col. 5, ll. 2-21.

In other words, Claim 1 of the '036 Patent is a system that simply (i) allows a vessel operator to use a joystick to communicate to a control module or other computer the operator's desired rate of position change; (ii) carries out that position change by comparing the vessel's location (as determined by sensors) to the vessel operator's desired location, and moves the vessel accordingly; and (iii) interprets a stationary joystick as a request by the vessel operator to keep the vessel in its current position, rather than a request to let the vessel drift. Put simply, Claim 1 of the '036 Patent is directed to controlling the movement of a marine vessel to remedy unintended movements caused by external effects. The specification of the '036 Patent recognizes that the devices referenced—"a[n] operator controllable device," a "sensor," and controllers—are all "known in the art." *Id.*, col.1, l. 63 - col.4, l. 20. Thus, Claim 1 of the '036 Patent does not claim any *novel* device, sensor, or controller to achieve its purpose of damping unwanted movements of the marine vessel.

### C. The '232 Patent

As the specification of the '232 Patent notes, the '232 Patent, titled “station keeping methods,” is related to “automatic positioning systems and methods for marine vessels.” '232 Patent, col. 1, ll. 1-14. Claim 1 of the '232 Patent, the only claim in the '232 Patent asserted against defendant, is merely a method claim; it makes no claim to any novel device, instrumentality, or apparatus and instead, it claims only a method that incorporates prior-art devices, instrumentalities, and apparatuses to maintain a vessel at a specific position by using information from a prior position. Claim 1, set forth in its entirety in the footnote below,<sup>4</sup> consists of six elements which can be summarized in plain language as follows:

- The first and second claim elements simply list the required steps of maintaining the vessel at an initial position through use of a prior-art method to operate a propulsion device to counteract external forces on the vessel.
- The third and fourth elements simply recite the necessary step of receiving a command from the vessel operator to maintain the vessel at a new position.
- The fifth and sixth elements simply list the required steps of utilizing information that was previously used to maintain the vessel at the initial position to maintain the vessel at the new position.

'232 Patent, col. 15, ll. 28-50. In essence, therefore, Claim 1 of the '232 Patent is directed to maintaining a vessel at a specific position by using information from a prior position. But Claim 1 of the '232 Patent does not rely on any novel device, instrumentality, or apparatus to

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<sup>4</sup> “A method for maintaining position of a marine vessel in a body of water, the vessel being propelled by a marine propulsion device powered by an engine, the method comprising:”

- a) “accepting a command to maintain the vessel at an initial selected position;”
- b) “utilizing position feedback control to determine an initial steering angle, an initial gear position, and an initial engine speed for the propulsion device that cause the propulsion device to produce a linear thrust vector that counteracts a net external force on the vessel and maintains the vessel in the initial selected position;”
- c) “propelling the vessel to a new selected position;”
- d) “accepting a command to maintain the vessel at the new selected position;”
- e) “utilizing information related to one of the position feedback control and the linear thrust vector to predict control parameters required to maintain the vessel at the new selected position; and”
- f) “controlling the propulsion device according to the predicted control parameters to maintain the vessel at the new selected position.”

accomplish its purpose of maintaining a vessel at a specific position by using information from a prior position.

#### D. The '468 Patent

As the specification of the '468 Patent notes, the '468 Patent, titled a “system and method for controlling a position of a marine vessel near an object,” is focused on “controlling movement and position of a marine vessel in a body of water.” '468 Patent, col. 1, ll. 1-9. Claim 1 of the '468 Patent, the sole claim in the '468 Patent at issue, is a system claim. Like Claim 1 of the '928, '036, and '232 patents, Claim 1 of the '468 Patent makes no claim to any novel device, instrumentality, or apparatus; instead, it claims only a system that incorporates prior-art devices, instrumentalities, and apparatuses for the purpose of causing a vessel to brake when near an object. Claim 1, set forth in its entirety in the footnote below,<sup>5</sup> consists of ten elements which can be summarized in plain language as follows:

- The first, second, third, and fourth claim elements simply recite the necessity for the use of generic, prior-art sensors to determine the vessel’s location, speed, direction of travel, and direction of rotation.
- The fifth and sixth claim elements simply list the necessity for the use of a generic control module in communication with the above-mentioned sensors and a generic propulsion system in communication with the control module.

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<sup>5</sup> “A system for controlling a position of a marine vessel near an object, the system comprising:”

- a) “a location sensor that determines a location of the marine vessel;”
- b) “a speed sensor that determines a speed of the marine vessel;”
- c) “a direction sensor that senses a direction of travel of the marine vessel;”
- d) “a rotational sensor that senses a direction of rotation of the marine vessel;”
- e) “a control module in signal communication with the location sensor, the speed sensor, the direction sensor, and the rotational sensor; and”
- f) “a marine propulsion system in signal communication with the control module;”
- g) “wherein the control module determines that the marine vessel is within a predetermined range of the object based on the marine vessel’s location;”
- h) “wherein in response to determining that the marine vessel is within the predetermined range of the object, the control module controls the propulsion system to produce at least one of a braking linear thrust and a braking moment to counter current movement of the marine vessel;”
- i) “wherein the control module sets a direction of the braking linear thrust as being opposite the marine vessel’s direction of travel; and”
- j) “wherein the control module sets a direction of the braking moment as being opposite the marine vessel’s direction of rotation.”

- The seventh, eighth, ninth, and tenth elements simply list the requirement of the control module determining whether the vessel is within a predetermined range of an object and, if so, issuing a braking command in the opposite direction of the object to stop the vessel.

'468 Patent, col. 17, l. 54-col. 18, l. 17. In essence, therefore, Claim 1 of the '468 Patent determines that the vessel is near an object and then applies a braking force to stop the vessel. Thus, Claim 1 of the '468 Patent is directed to controlling the position of a marine vessel by braking when it is near an object. But Claim 1 of the '468 Patent does not rely on any novel device, instrumentality, or apparatus to do so.

## E. The '073 Patent

As the specification of the '073 Patent notes, the '073 Patent, titled “station keeping system and method,” relates to “automatic positioning systems and methods for marine vessels.” '073 Patent, col. 1, ll. 1-15. Claim 1 of the '073 patent, the only claim in the '073 Patent asserted against the defendant, is solely a method claim. Like the other patents at issue, it makes no claim to any novel device, instrumentality, or apparatus; it claims only a method that incorporates prior-art devices instrumentalities, and apparatuses. Claim 1, set forth in its entirety in the footnote below,<sup>6</sup> consists of eight elements which can be summarized in plain language as follows:

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<sup>6</sup> “A method for maintaining a marine vessel at a target global position and a target heading in a body of water, the method being carried out by a control module and comprising:”

- a) “receiving measurements related to an attitude of the marine vessel;”
- b) “estimating roughness conditions of the body of water based on the attitude measurements;”
- c) “determining a difference between an actual global position of the marine vessel and the target global position and a difference between an actual heading of the marine vessel and the target heading;”
- d) “calculating a desired linear velocity based on the position difference and a desired rotational velocity based on the heading difference;”
- e) “based on the roughness conditions, filtering an actual linear velocity of the marine vessel and an actual rotational velocity of the marine vessel;”
- f) “determining a difference between the desired linear velocity and the filtered actual linear velocity and a difference between the desired rotational velocity and the filtered actual rotational velocity;”
- g) “calculating marine vessel movements that will minimize the linear velocity difference and the rotational velocity difference; and”
- h) “operating a propulsion system of the marine vessel to carry out the calculated marine vessel movements.”

- The first and second claim elements merely recite the necessity of a generic control module which receives attitude measurements, *i.e.* roll, heave, pitch, and yaw, and uses those measurements to estimate the water's roughness conditions.
- The third claim element recites the required step of the control module determining the difference between a vessel operator's target position and heading and the vessel's actual position and heading.
- The fourth claim element simply lists the required step of the control module calculating the linear velocity and rotational velocity necessary to correct the difference between the target and actual positions and headings of the vessel.
- The fifth and sixth claim elements recite the necessity of the control module determining the differences between the linear and rotational velocities needed to correct the vessel's position and heading and the actual linear and rotational velocities of the vessel.
- The seventh and eighth claim elements recite the necessity of the control module determining and implementing the vessel movements required to minimize the differences calculated in the sixth claim element.

'073 Patent, col. 15, ll. 25-52. In essence, therefore, Claim 1 is a “method for maintaining a marine vessel at a target global position and a target heading in a body of water” by “estimating roughness conditions of the body of water.” *Id.* But Claim 1 of the '073 Patent does not rely on any novel device, instrumentality, or apparatus to do so.

## II.

Analysis of the merits of defendant's Motion to Dismiss properly begins with the two-step analysis provided by the Supreme Court in *Alice*, which guides lower courts in distinguishing subject matter eligible for patent protection under § 101 from patent-ineligible abstract ideas. *Alice* first instructs courts to determine whether the claims at issue are “directed to an abstract idea.” *Alice*, 573 U.S. at 219. If a claim is directed to an abstract idea then the second step in the *Alice* analysis is to ascertain whether the patent contains an “inventive concept” that serves to “transform the nature of the claim” into patent-eligible subject matter. *Id.* at 217.

With regard to the first *Alice* step, although there is no “single, succinct, usable definition

or test” defining an abstract idea, *Amdocs (Isr.) Ltd. v. Openet Tel.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016), the Supreme Court and the Federal Circuit have provided certain principles that aide courts in the identification of abstract ideas. An abstract idea need not be a “preexisting, fundamental truth”—instead, merely a “longstanding . . . practice” can suffice. *Alice*, 573 U.S. 220. Thus, methods that “[h]umans have performed” are abstract ideas ineligible for patent protection. *Voter Verified, Inc. v. Election Sys. & Software LLC*, 887 F.3d 1376, 1385 (Fed. Cir. 2018). For patents like those at issue here which purport to offer technological improvements, the Federal Circuit has instructed courts to inquire whether “the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic process and machinery.” *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1368 (Fed. Cir. 2020) (internal quotation marks and citation omitted). In considering patents purporting to offer technological improvements to methods performed by humans, the Federal Circuit has made clear that “the automation of [a] conventional human process to make it more efficient” does not save an idea from abstractness. *Repifi Vendor Logistics, Inc. v. IntelliCentrics, Inc.*, 2022 WL 794981, at \*2 (Fed. Cir. Mar. 15, 2022). And with respect to patents that rely on mathematical equations and calculations, the Supreme Court has noted that a generic mathematical formula is itself an abstract idea and cannot render patent-eligible an idea because “[a] competent draftsman could attach some [idea] to almost any mathematical formula.” *Parker v. Flook*, 437 U.S. 584, 590 (1978).

If a claim is directed to an abstract idea then the *Alice* analysis requires a second step to ascertain whether the patent contains an “inventive concept” that serves to “transform the nature of the claim” into patent-eligible subject matter. *Alice*, 573 U.S. at 217. In this regard, it is settled that “well-understood, routine, conventional activity” is insufficient to constitute an

inventive concept. *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 73 (2012). This is so because a claim that recites an abstract idea must include “additional features to ensure that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].” *Alice*, 573 U.S. at 221 (internal quotation marks and citations omitted). Limiting an abstract idea to a “particular technological environment” is similarly insufficient to pass muster under step two of the *Alice* analysis. *Id.* at 222-23. And particularly pertinent here, “mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology.” *Credit Acceptance Corp. v. Westlake Services*, 859 F.3d 1044, 1055 (Fed. Cir. 2017). Relatedly, because automation using computers often results in improved efficiency, the “improved speed or efficiency inherent with applying the abstract idea on a computer” cannot supply an inventive concept. *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1367 (Fed. Cir. 2015).

Importantly, although the burden of establishing invalidity rests on the party asserting invalidity—here, defendant—the Federal Circuit has made clear that patent eligibility “can be determined at the Rule 12(b)(6) stage . . . when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018).

At the Rule 12(b)(6) stage, the “sources properly considered” are “the complaint, the patent, and materials subject to judicial notice.” *Id.* at 1128. If allegations in the complaint conflict with matters proper for judicial notice, the district court need not “accept as true” those conflicting allegations from the complaint. *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 913 (Fed. Cir. 2017) (internal quotation marks and citation omitted). And relevant here, a court has “discretion” to “take judicial notice of a longstanding practice” even where

“there is no evidence of such practice in the intrinsic record.” *CardioNet*, 955 F.3d at 1373.

### III.

Each of the five at-issue patent claims must in turn be analyzed according to the *Alice* two-step framework by (i) determining whether the claims are directed to abstract ideas and (ii) ascertaining whether the claims contain any inventive concept sufficient to transform the claims into patent-eligible subject matter.

#### A. The '928 Patent

Claim 1 of the '928 Patent is directed to the idea of maintaining the position of a marine vessel at a selected global position, an activity also referred to as “station keeping.” This is evident from the claim language itself, which describes Claim 1 as “[a] method for maintaining a marine vessel in a selected position.” '928 Patent, col. 21, ll. 43-44. Station keeping of a marine vessel is an abstract idea under *Alice*. The parties do not dispute that vessel operators and captains have been maintaining a vessel’s position and heading for millennia, and in any event, such a fact is so obvious that it is proper for judicial notice pursuant to Rule 201, Fed. R. Civ. P. Indeed, at the June 24, 2022 hearing, plaintiff’s counsel acknowledged that mariners have been maintaining vessels’ position and heading “for centuries” using human “discretion” and “judgment.” June 24, 2022 Tr. at 12:15-23. And even the '928 Patent itself describes that the prior art contained various methods “for maintaining a boat in a fixed position.” '928 Patent, col. 1, ll. 47-78. Thus, it cannot be disputed that maintaining the position of a marine vessel at a selected global position is an abstract idea reflecting a longstanding human practice. As *Alice* held, such a longstanding human practice fails at step one of the analysis. *Alice*, 573 U.S. at 220.

Clear Federal Circuit precedent confirms that Claim 1 of the '928 Patent is directed to an abstract idea. For example, in *Repifi Vendor Logistics, Inc.*, the Federal Circuit concluded that

the patent at issue there—a credentialing process for “managing visitor access to access-controlled environments like hospitals, health care facilities, office buildings, and the like”—was directed to an abstract idea. 2022 WL 794981, at \*1. The “conventional method” for credentialing involved “manned reception desks at which a receptionist could verify a visitor’s identity and issue a temporary, limited-use paper identification badge.” *Id.* Although the plaintiff argued that “the claimed method [was] a technological solution,” the Federal Circuit concluded that the patent failed *Alice*’s first step because “the automation of the credentialing process” using “existing technology” could not save the claim “from targeting an abstract concept.” *Id.* at \*2. Like the patent at issue in *Repifi Vendor Logistics, Inc.*, Claim 1 of the ’928 Patent merely automates a process long performed by humans and is therefore directed to an abstract idea.

Also instructive here is the Federal Circuit’s decision in *Voter Verified, Inc.*, 887 F.3d 1376. At issue there was a patent which used a computer to verify a human voter’s vote and submit that vote for tabulation. *Id.* at 1385. The Federal Circuit concluded that the claims failed *Alice* step one because they were directed to “verifying the vote[] and submitting the vote for tabulation” and that “[h]umans have performed [that] fundamental activity that forms the basis for our democracy for hundreds of years.” *Id.* Claim 1 of the ’928 Patent, like the patent in *Voter Verified, Inc.*, is directed at a fundamental activity that humans have performed for hundreds of years.

Seeking to avoid the conclusion that Claim 1 of the ’928 Patent is directed to an abstract idea, plaintiff’s counsel stated in briefing and at oral argument that the primary benefit from Claim 1 of the ’928 Patent is the “lack of human activity.” June 24, 2022 Tr. at 12:21; *see also* Plaintiff’s Supp. Opp’n to MTD at 19 (Dkt. 39) (hereinafter “Pl.’s Supp. Opp’n”). Plaintiff

argues that this benefit makes clear that Claim 1 of the '928 Patent is not directed to an abstract idea. This argument fails; maintaining the position of a marine vessel through the use of a computer and thereby reducing human activity is nothing more than "mere automation of manual processes using generic computers," which cannot "constitute a patentable improvement." *Credit Acceptance Corp.*, 859 F.3d at 1055. Indeed, merely configuring "generic computers" to "supplant and enhance" an "otherwise abstract manual process is precisely the sort of invention that the *Alice* Court deemed ineligible for patenting." *Id.* at 1056-57 (internal quotation marks and citation omitted). In any event, plaintiff acknowledges, and the specification of the '928 Patent confirms, that the prior art contained methods whereby a computer would control the position of the vessel. Specifically, plaintiff's counsel acknowledged that "some prior art systems existed where releasing a joystick would re-engage an autopilot function." Plaintiff's Opp'n to MTD at 22 (Dkt. 20) (hereinafter "Pl.'s Opp'n"). Thus, with or without a computer, the activity of maintaining the position of a marine vessel is an abstract idea that does not become patent-eligible simply because a computer is used.

Plaintiff further argues that four cases—three from the Federal Circuit and one from the Eastern District of Virginia<sup>7</sup>—support the conclusion advocated by plaintiff that Claim 1 of the '928 Patent is not directed to an abstract idea. These cases, closely read, do not support this argument. First, plaintiff relies chiefly on *McRO, Inc. v. Bandai Namco Games America Inc.*, a Federal Circuit decision holding that claims are patent-eligible when they claim "a distinct process to automate a task previously performed by humans." 837 F.3d 1299, 1314-15 (Fed. Cir. 2016) (emphasis added). Yet plaintiff ignores that the Federal Circuit made clear in *McRO* that

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<sup>7</sup> *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); *EcoServices, LLC v. Certified Aviation Serv., LLC*, 830 F. App'x 634 (Fed. Cir. 2020); *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017); *Jaguar Land Rover Ltd. v. Bentley Motors Ltd.*, 388 F. Supp. 3d 665 (E.D. Va. 2019).

it is “the incorporation of [] claimed rules” with “specific” and “unconventional” characteristics that saves an idea from abstractness, “not the use of the computer.” *Id.* at 1303, 1313-14. Nothing in Claim 1 of the ’928 Patent contains such specific distinct rules or processes. Rather, Claim 1 of the ’928 Patent contains only steps such as determining the “current global position” and “current heading” of a marine vessel, “determining a subsequent global position” and “heading” of the vessel, determining the difference in positions and heading, and adjusting propulsion accordingly. ’928 Patent, col. 21, l. 42 – col. 22, l. 27. These steps can be performed by humans; namely, a human can determine where a vessel is located, where a vessel is directed, where the human wants a vessel to go, and then the human can adjust that vessel’s direction accordingly. And such “methods which can be performed entirely in the human mind” or “by a human using a pen and paper” are the types of methods “that are free to all men and reserved exclusively to none,” as the Federal Circuit confirmed when it invalidated a patent claim for verifying credit card transactions. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372-73 (Fed. Cir. 2011). The patents at issue in *McRO* are plainly distinguishable from the ’928 Patent and thus *McRO* does not support plaintiff’s argument for the patentability of Claim 1 of the ’928 Patent.

Plaintiff’s reliance on other decisions are similarly unavailing. In *EcoServices, LLC v. Certified Aviation Serv., LLC*, 830 F. App’x 634 (Fed. Cir. 2020), the at-issue patent claims were directed to a specific way to automate the washing of aircraft engines. Although “human operators were washing aircraft engines before the patented invention,” the at-issue patent claims were directed to a “specific combination of a type of washing unit, information detector, and control unit, configured in a certain way to create technical improvements to systems for washing jet engines.” *Id.* at 643. But as discussed above with regard to *McRO*, Claim 1 of the

'928 Patent contains no “specific combination” of any elements “configured in a certain way” to create “technical improvements.” *See id.* Unlike the claims in *EcoServices* and *McRO*, which developed new ways for achieving old goals, Claim 1 of the '928 Patent does not develop a new algorithm for keeping a vessel stationary or offer a new arrangement of sensors. Instead, Claim 1 contains only conventional, generic rules. *See* '928 Patent, col. 21, l. 42-col. 22, l. 27. Such generic rules are insufficient to render a claim patent-eligible because these generic rules merely recite concepts and steps which humans have performed. And as the Federal Circuit held in *Voter Verified, Inc.*, steps which humans have long performed are not patent-eligible. 887 F.3d at 1385.

The next case on which plaintiff relies is similarly unavailing. In *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017), the Federal Circuit held that the patent at issue there was not directed to an abstract idea because the claims specified “a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a moving platform.” *Id.* at 1349. But in sharp contrast to the patent at issue in *Thales*, the '928 Patent does not claim any “unconventional configuration” of said sensors or any other “unconventional” element that could confer patent-eligibility. *See Thales*, 850 F.3d at 1349. And not only does Claim 1 of the '928 Patent claim no unconventional configuration of sensors as the *Thales* patent does, it does not recite any sensors at all. Thus, *Thales* does not support plaintiff’s argument for patentability of Claim 1 of the '928 Patent.

Finally, plaintiff points to a decision from this District: *Jaguar Land Rover Ltd. v. Bentley Motors Ltd.*, 388 F. Supp. 3d 665 (E.D. Va. 2019). But that decision is also inapposite because there, unlike here, the court concluded that the patent at issue was not directed to an

abstract idea because it was “not clear that people could” or did “do what the” patent claimed.

*Id.* at 680. Specifically, in *Jaguar Land Rover Ltd.*, the claimed invention allowed a driver of a vehicle to use an input panel to select one of several off-road driving surfaces—

Grass/Gravel/Snow, Mud and Ruts, Sand, and Rocks—and the computer in the claimed invention used that information to adjust various subsystems of the vehicle such as the engine, transmission, brakes, traction control, suspension, and steering. *Id.* at 670-71. The *Jaguar Land Rover Ltd.* Court concluded that the patented invention did “not computerize what humans would otherwise do” because the patented invention, for example, changed the wheel spin of the vehicle and adjusted its suspension, neither of which humans could do without the invention. *Id.* at 680.

Thus, the technology in *Jaguar Land Rover Ltd.* was “more than mere computerization of functions that people can already do.” *Id.* By contrast, Claim 1 of the ’928 Patent itself describes that the prior art contained various methods “for maintaining a boat in a fixed position” and therefore merely computerizes a human activity. ’928 Patent, col. 1, ll. 47-78. Accordingly, Claim 1 of the ’928 Patent is directed to an abstract idea—maintaining the position of a marine vessel at a selected global position. Thus, none of the cases on which plaintiff relies belies the clear conclusion that Claim 1 of the ’928 Patent is directed to an abstract idea.

Because Claim 1 of the ’928 Patent is directed to an abstract idea, the next step under *Alice* is to consider whether the claim contains an “inventive concept” that serves to “transform the nature of the claim” into patent-eligible subject matter. *Alice*, 573 U.S. at 217. For step two, the Supreme Court has made clear that “well-understood, routine, conventional activity” is insufficient to constitute an inventive concept. *Mayo*, 566 U.S. at 73. Rather, a claim that is directed to an abstract idea must contain “additional features to ensure that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].” *Alice*, 573 U.S. at 221

(internal quotation marks and citations omitted). And, limiting an abstract idea to a “particular technological environment” is insufficient to pass muster under step two of the *Alice* analysis.

*Id.* at 222-23.

Defendant is correct that there is no inventive concept in Claim 1 of the ’928 Patent. The only difference between Claim 1 of the ’928 Patent and the abstract idea of maintaining the position and heading of a marine vessel is that Claim 1 is carried out with a computer. But in *Alice*, the Supreme Court made clear that “computer implementation” of an abstract idea does “not supply the necessary inventive concept.” 573 U.S. at 223. Nor does “limiting the use of an abstract idea” to “a particular technological environment” serve to provide the necessary inventive concept for patentability. *Id.* In this regard, the Federal Circuit has held that “generic computer components” are “insufficient to add an inventive concept to an otherwise abstract idea.” *In re TLI Commc’ns LLC Pat. Litig.*, 823 F.3d 607, 614 (Fed. Cir. 2016). Claim 1 of the ’928 Patent thus contains no inventive concept sufficient to transform Claim 1 of the ’928 Patent into patent-eligible subject matter.

Plaintiff disagrees and argues that Claim 1 of the ’928 Patent contains an inventive concept, namely that when the vessel operator releases the joystick or other manually operable control device, the invention instantaneously keeps the vessel stationary. Indeed, at the June 24, 2022 hearing, plaintiff’s counsel described the inventive concept as the “immediate[] activat[ion]” of station keeping. June 24, 2022 Tr. at 18:5-8. In plaintiff’s view, this transforms the nature of the claim because it allows the vessel to remain stationary even after all humans have released the controls, which plaintiff claims resolves shortcomings in the prior art operation of vessels. *See* Pl.’s Supp. Opp’n at 20. Plaintiff’s argument is unpersuasive. Plaintiff’s proffered benefit is the sort of “improved speed or efficiency inherent with applying the abstract

idea on a computer” that the Federal Circuit has said cannot supply the requisite inventive concept. *Intellectual Ventures I LLC*, 792 F.3d at 1367.

As a final matter, plaintiff argues that defendant stated in advertisements that an invention that allows the vessel to remain stationary after all humans have released the controls is somehow inventive.<sup>8</sup> See Pl.’s Supp. Opp’n at 20. Yet even defendant’s advertisements note that the touted benefits stem from “automation” rather than from some inventive concept.<sup>9</sup> And although defendant’s materials make some reference to the innovation of the technology, there is no evidence that defendant, in its marketing materials, was referencing to step two of the *Alice* test rather than simply using marketing language to tout its product. In addition, although plausible factual allegations in a complaint must be accepted as true at the motion to dismiss stage, “conclusion[s] couched as [] factual allegation[s]”—such as the conclusion that defendant’s advertisements admit the inventive nature of the at-issue claims—need not be accepted as true. *Ashcroft v. Iqbal*, 556 U.S. 662, 678-79 (2009).

Thus, none of plaintiff’s arguments that Claim 1 of the ’928 Patent contains an inventive concept are persuasive; there is no such inventive concept in Claim 1 of the ’928 Patent. Accordingly, because Claim 1 of the ’928 Patent does not pass muster under either *Alice* step one or step two, the claim is not eligible for patent protection, and the Motion to Dismiss must be granted in this regard.

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<sup>8</sup> Plaintiff attached to the Complaint various materials in which defendant has touted the benefit of defendant’s allegedly infringing technology. Because the materials are attached to the Complaint, it is appropriate to consider them. See Rule 10(c), Fed. R. Civ. P. But the materials do not support plaintiff’s argument with regard to *Alice* step two.

<sup>9</sup> See, e.g., Complaint, Ex. K (“Take control with Volvo Penta Assisted Docking – the next generation of marine automation.”); Complaint, Ex. Q (“The Assisted Docking system gives the captain better control when docking a boat by automating his or her intentions.”).

## B. The '036 Patent

By its terms, Claim 1 of the '036 Patent is directed to “controlling movement of a marine vessel,” to respond to “unintended movements” that “are caused by external effects on the vessel, such as wind, current, etc.” '036 Patent, col. 5, l. 2; *id.*, col. 2, ll. 51-56. And the idea to which Claim 1 of the '036 Patent is directed—namely, controlling the movement of a marine vessel to remedy unintended movements caused by external effects—is an abstract idea; Claim 1 of the '036 Patent merely seeks to patent what humans have done for millennia. *See id.*, col. 2, ll. 51-56 (noting that in the prior art an “operator must compensate for” movements caused by external effects).

In opposition to this conclusion, plaintiff characterizes Claim 1 of the '036 Patent as directed to “*technological improvements* in systems for controlling movement of a marine vessel.” Pl.’s Supp. Opp’n at 15 (emphasis added). But one cannot convert an abstract idea into a non-abstract idea by adding the words “*technological improvements*” in front of the abstract idea. As the Federal Circuit has made clear, automation using “existing technology” does not transform an abstract idea into a patent-eligible one because “the automation of [a] conventional human process to make it more efficient is itself an abstract idea.” *Repifi Vendor Logistics, Inc.* 2022 WL 794981, at \*2. Yet that is precisely what Claim 1 of the '036 Patent does: it uses prior-art technology—controllers, sensors, and a joystick-like device—to carry out steps previously performed by humans. *See* '036 Patent, col. 5, ll. 2-21 (listing the elements of Claim 1); *id.* at col. 1, l. 63 – col. 2, l. 13; col. 3, l. 52 – col. 4, l. 20 (stating that these technologies are known in the prior art). Put simply, automating a conventional human process—controlling the movement of a marine vessel to respond to unintended movements caused by external effects—does not alter the fact that Claim 1 of the '036 Patent is directed to an abstract idea.

Seeking to avoid the conclusion that Claim 1 of the '036 Patent is directed to an abstract idea, plaintiff again cites *McRO* and argues that before the '036 Patent, “a boat operator would have to manually [sic] and through subjective determinations compensate for movements from, among other things, wind and current.” Pl.’s Opp’n at 14. This is important, plaintiff argues, because the Federal Circuit’s decision in *McRO* counsels that a claim is not directed to an abstract idea when, through rules, it achieves a result that was previously achievable only through “subjective determinations.” *McRO*, 837 F.3d at 1314. Yet *McRO* does not support a conclusion that Claim 1 of the '036 Patent is non-abstract. In *McRO*, the Federal Circuit held as patent-eligible a patent that claimed an invention for automating—through the use of new rules—certain tasks otherwise performed subjectively by 3-D animators. *Id.* In contrast to the patents at issue in *McRO*, Claim 1 of the '036 Patent merely lists devices, sensors, controllers, and a result, without specifying rules for achieving the result of controlling the movement of a marine vessel to respond to unintended movements caused by external effects. *See* '036 Patent, col. 5, ll. 2-21. Simply put, unlike the patents in *McRO*, the '036 Patent claims no rules and no unique technology. Claim 1 of the '036 Patent essentially “[s]tat[es] an abstract idea while adding the words ‘apply it with a computer’” and is therefore patent-ineligible. *Alice*, 573 U.S. at 223 (internal quotation marks and citation omitted).

Plaintiff next argues that the '036 Patent interprets a lack of movement of the operator controllable device to be a request for active suppression of position change rather than as a request for no position change. *See* Pl.’s Supp. Opp’n at 16. This step, however, is nothing more than telling a computer to apply a manual process, which is insufficient to save Claim 1 of the '036 Patent, for “[s]tating an abstract idea while adding the words apply it is not enough for patent eligibility.” *Alice*, 573 U.S. at 223 (internal quotation marks and citation omitted). Vessel

captains have long released operator controllable devices to request active suppression of position change, as plaintiff's counsel acknowledges. June 24, 2022 Tr. at 16:25-17:5. The difference now is that a computer, rather than a mate or other human helper, takes control of the vessel to maintain position. Thus, the difference between Claim 1 of the '036 Patent and the way vessels have been controlled for millennia is simply that a computer rather than a mate is controlling the movement of the vessel. This difference is not enough to render patent eligible Claim 1 of the '036 Patent because the Federal Circuit has held that merely configuring "generic computers" to "supplant and enhance" an "otherwise abstract manual process is precisely the sort of invention that the *Alice* Court deemed ineligible for patenting." *Credit Acceptance Corp.*, 859 F.3d at 1056-57. Thus, despite plaintiff's arguments, Claim 1 of the '036 Patent is directed to an unpatentable abstract idea.

Next, with regard to step two of the *Alice* analysis, careful review of Claim 1 of the '036 Patent reveals no inventive concept sufficient to save the Claim. For this step of the *Alice* test, it is settled that "well-understood, routine, conventional activity" is insufficient to constitute an inventive concept. *Mayo*, 566 U.S. at 73. A claim that recites an abstract idea must include "additional features to ensure that the [claim] is more than a drafting effort designed to monopolize the [abstract idea]." *Alice*, 573 U.S. at 221 (internal quotation marks and citations omitted). No such additional features appear in Claim 1 of the '036 Patent and thus Claim 1 of the '036 Patent fails step two because the only difference between Claim 1 of the '036 Patent and the abstract idea is that the claimed invention is automated. Accordingly, there is no sufficiently inventive concept.

Plaintiff's argument for an inventive concept is based solely on the fifth and final element of Claim 1 of the '036 Patent. This is so because, according to the specification, the first four

elements are “prior art,” “known in the art,” and “well-known and readily available.” *See ’036 Patent*, col. 1, l.63 – col.2, l. 13. But even the fifth element, which provides that the position change controller “is configured to interpret a lack of movement of the operator controllable device to be a request for active suppression of position change rather than as a request for no position change,” *id.*, col. 5, ll. 17-21, is result-based and does not recite any inventive technology. As the Federal Circuit held in *Interval Licensing LLC v. AOL, Inc.*, such result-based claims are patent-ineligible. 896 F.3d 1335, 1344 (Fed. Cir. 2018). Looking past the patent-ese, the purportedly inventive concept proposed by plaintiff is similar to the non-inventive concept in the ’928 Patent: a vessel captain releases the vessel’s controls, but a computer, rather than a mate, keeps the vessel’s position steady thereby increasing efficiency. Thus, that the controller interprets a lack of movement of the operator controllable device to be a request for active suppression of position change is not an inventive concept for the same reasons that there was no inventive concept for Claim 1 of the ’928 Patent: it is mere automation of a function normally performed by humans and thus is not eligible for patent protection. *See supra*. In any event, as even plaintiff acknowledges, autopilot systems already exist in the prior art which allow a vessel captain to release a joystick and relinquish control to a computer. *See* Pl.’s Opp’n at 22.

Plaintiff also contends that the ’036 Patent combines and integrates several components—“a joystick,” a “sensor,” and an “actuator”—thereby making the claim patent-eligible. *See ’036 Patent*, col.2, l. 17, col. 3, l. 67 – col. 4, l.2, col. 4, ll. 25-26 (describing joysticks, sensors, and actuators as known in the prior art). But these are “generic technolog[ies]” by which the abstract idea is carried out, and are therefore insufficient to supply an inventive concept. *In re TLI Commc’ns LLC*, 823 F.3d at 612.

Thus, because Claim 1 of the ’036 Patent does not include any inventive concept

sufficient to transform the claim to be patent-eligible, Claim 1 of the '036 Patent fails both step one and step two of the *Alice* analysis. Accordingly, the Motion to Dismiss must be granted in this regard.

### C. The '232 Patent

Claim 1 of the '232 Patent is directed to maintaining a vessel at a specific position using information from a prior position. This is evidenced by the claim language itself, which (i) “accept[s] a command to” and maintains “the vessel in the initial selected position,” (ii) moves the vessel to a new position and accepts a command to maintain “the vessel at the new” position, and (iii) uses information from the first position “to predict control parameters required to maintain the vessel at the new selected position.” '232 Patent, col. 15, ll. 28-50.

The idea of maintaining a vessel at a specific position using information from a prior position is an abstract idea. For one, as one district court has noted, “monitoring and reporting the location of a vehicle” is an abstract idea. *Shipping and Transit, LLC v. Hall Enters., Inc.*, 2017 WL 3485782, at \*3 (C.D. Cal. Jul. 5, 2017). Moreover, the specification of the '232 Patent reflects that, in the prior art, an operator must use “knowledge of the environmental influences being applied to the vessel and how to overcome them”—knowledge gained from prior locations—to maintain a vessel’s position. '232 Patent, col. 14, ll. 32-34. Thus, from case-law and from the '232 Patent itself, it is clear that Claim 1 of the '232 Patent is directed to an abstract idea.

In opposition to this conclusion that Claim 1 of the '232 Patent is directed to an abstract idea, Plaintiff again argues that adding the words “technological improvements” to the idea to which Claim 1 of the '232 Patent is directed saves the Claim from abstractness. To be sure, the invention claimed in Claim 1 of the '232 Patent allows a vessel “operator to change vessel

position and/or heading while any environmental influences are still being offset automatically.”

’232 Patent, col. 14, ll. 28-30. But in this case—as in *Repifi Vendor Logistics, Inc.*, which held that an automated credentialing process was not patent-eligible—“automation” is “itself an abstract idea” and cannot save Claim 1 of the ’232 Patent from being directed to an abstract idea. 2022 WL 794981, at \*2. Thus, adding the phrase “technological improvements” in front of the idea to which Claim 1 of the ’232 Patent is directed cannot save the Claim from being directed to an abstract idea.

Plaintiff next contends that *CardioNet* compels a conclusion that Claim 1 of the ’232 Patent is patent-eligible. At issue in *CardioNet* was a patent which developed a new way to detect certain heart issues. But in *CardioNet*, the patent claimed “techniques” that were not “previously employed” by humans and thus there was no indication that “the claims merely computerize[d] pre-existing techniques.” 955 F.3d at 1370. That is contrary to Claim 1 of the ’232 Patent, which claims what was previously done by vessel captains and thus offers no improvements other than the “improved speed or efficiency inherent with applying the abstract idea on a computer.” *Intellectual Ventures I LLC*, 792 F.3d at 1367-68 (holding that a budgeting invention that notified a user once a pre-set spending limit was reached was patent-ineligible because the only improvement in the claimed invention over what humans had previously done was that the claimed invention increased speed and efficiency). Accordingly, Claim 1 of the ’232 Patent is directed to an abstract idea.

Next, step two of the *Alice* inquiry requires consideration of whether Claim 1 of the ’232 Patent contains an “inventive concept” that serves to “transform the nature of the claim” into patent-eligible subject matter. 573 U.S. at 217. Here, the only material difference between maintaining a vessel in a specific position using information from a prior position—which as the

specification of the '232 Patent notes is prior art—and Claim 1 of the '232 Patent is that Claim 1 of the '232 Patent is automated. This automation cannot supply the requisite inventive concept because, as the Federal Circuit has noted, “relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.” *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (holding that a patent claiming an offer-based pricing method was invalid because it merely relied on a computer to perform a generic task usually performed by humans). Nor can plaintiff rescue Claim 1 of the '232 Patent merely by noting that it operates “more efficiently” than a human would. July 28, 2022 Tr. at 37:17. This is so because the Federal Circuit has made clear that the “improved speed or efficiency inherent with applying the abstract idea on a computer” cannot supply the inventive concept. *Intellectual Ventures I LLC*, 792 F.3d at 1367.

Searching for another possible inventive concept, plaintiff next argues that the '232 Patent is technologically innovative because it stores data that can be re-used later. But this argument fails because the Federal Circuit has held, “1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory” is “undisputedly well-known” and therefore cannot supply an inventive concept. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Finally, plaintiff contends that, in the prior art, no one was performing the sort of calculations contemplated by Claim 1 of the '232 Patent. But Claim 1 of the '232 Patent claims no calculations. See '232 Patent, col. 15, ll. 28-50. Accordingly, plaintiff has identified no concept sufficiently inventive enough to transform the nature of Claim 1 of the '232 Patent into patent-eligible subject matter. Thus, because Claim 1 of the '232 Patent fails both steps of the *Alice* analysis, the Motion to Dismiss must be granted with regard to Claim 1 of the '232 Patent.

*See Alice*, 573 U.S. at 217.

#### D. The '468 Patent

Applying the same inquiry to the '468 Patent, Claim 1 is directed to controlling the position of a marine vessel by braking when the vessel is near an object. This is based on the claim language itself, which (i) determines, based on various sensors, if the vessel is “within a predetermined range of” an object and, if so, (ii) issues a braking thrust in the opposite direction of the direction of travel and a braking moment in the opposite direction of the vessel’s direction of rotation. '468 Patent, col. 17, l. 54-col. 18, l. 17. And controlling the position of a marine vessel by initiating a braking thrust when the vessel is near an object is quite plainly an abstract idea. As defendant correctly notes, the only difference between what Claim 1 of the '468 Patent claims and what has been done manually by vessel operators and boat captains for millennia is that Claim 1 of the '468 Patent substitutes a “control module” for a “boat captain.” July 28, 2022 Tr. at 29:13-14. What is more, the specification of the '468 Patent observes inventions already in existence that “control[] movement of a marine vessel near an object” by “generat[ing] thrust” to “ensure[] the marine vessel maintains at least a predetermined range from the object.” *Id.*, col. 2, ll. 7-20. Thus, Claim 1 of the '468 Patent is directed to an abstract idea.

Plaintiff proposes several arguments for why Claim 1 of the '468 Patent is not abstract; none are persuasive. Plaintiff first argues that Claim 1 of the '468 Patent is directed to “*technological improvements* in systems and methods for controlling a position of a marine vessel near an object with *greater accuracy*.” Pl.’s Supp. Opp’n at 18 (emphasis added). But as with the other patents discussed *supra*, adding the words “*technological improvements*” and “*greater accuracy*” does not serve to convert an abstract idea into one that is patent-eligible. As the Federal Circuit has held, “*automation*” using “*existing technology*” does not save a claim

from targeting an abstract concept because “the automation of [a] conventional human process to make it more efficient is itself an abstract idea.” *Repifi Vendor Logistics, Inc.*, 2022 WL 794981, at \*2. And “the use of conventional or generic technology” cannot save a claim from abstractness. *In re TLI Commc’ns LLC*, 823 F.3d at 612. Thus, that Claim 1 of the ’468 Patent contains technological improvements over the prior art does not alter the fact that Claim 1 of the ’468 Patent is directed to an abstract idea.

Second, plaintiff contends that, except for the difference between vehicles and vessels, Claim 1 of the ’468 Patent is indistinguishable from the patent in *Jaguar Land Rover Ltd.* This is incorrect. The *Jaguar Land Rover Ltd.* Court concluded that it was “not clear that people could do what the” patent claimed because the claimed invention used driver inputs to adjust various subsystems of the vehicle not ordinarily adjustable by humans including, for example, the wheel spin and suspension tuning. 388 F. Supp. 3d at 665, 670-71, 680. Claim 1 of the ’468 Patent, unlike the patent in *Jaguar Land Rover Ltd.*, is “mere computerization of functions that people can already do,” *id.* at 680, because humans can cause a vessel to brake before colliding with an object just as would the computer in the ’468 Patent. Thus, *Jaguar Land Rover Ltd.* is inapposite.<sup>10</sup>

Third, plaintiff once again points to *McRO*, *CardioNet*, and *Thales* to suggest that “processes that automate tasks that humans are capable of performing are patent eligible if

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<sup>10</sup> Plaintiff’s reference to the Titanic is likewise inapposite. Plaintiff argues that “had the claimed invention in Claim 1 of the ’468 Patent been implemented on the Titanic, the vessel itself would have applied a braking linear thrust and moment to avoid the iceberg when it was a predetermined distance away regardless of whether a human operator made a subjective determination to go full steam ahead.” Pl.’s Supp. Opp’n at 7. As an initial matter, plaintiff does not make clear which of the several specific errors on the Titanic Claim 1 of the ’468 Patent would have prevented. In any event, that Claim 1 of the ’468 Patent may have saved the Titanic from colliding with the iceberg demonstrates at most that automation has certain benefits over human control. But such automation cannot confer patent-eligibility on an otherwise abstract idea because the Federal Circuit has held that “automation” using “existing technology” does not save a claim from targeting an abstract concept. *Repifi Vendor Logistics, Inc.*, 2022 WL 794981, at \*2. Plaintiff’s argument with regard to the Titanic, therefore, is unpersuasive.

properly claimed.” Pl.’s Supp. Opp’n at 7. But *McRO*, *CardioNet*, and *Thales* all make clear that there must be something unconventional or inventive beyond the mere automation of the method or system. For instance, *McRO* makes clear that, to be patentable, a claim must include “rules with specific characteristics” that are “unconventional.” *McRO*, 837 F.3d at 1303, 1313. Claim 1 of the ’468 Patent includes no such unconventional rules. Likewise, *CardioNet* makes clear that a patent-eligible claim cannot be a method or system “previously employ[ed]” by a human. 955 F.3d at 1370. Claim 1 of the ’468 Patent does just that: it claims a system previously employed by humans. And *Thales* held that a patent utilizing generic technological components is patentable only if the claim specifies “a particular configuration” of those components and a “particular method” for using data garnered from those components. 850 F.3d at 1349. Again, Claim 1 of the ’468 Patent does not specify a particular configuration of generic components or a particular method for using data garnered from those components. Thus, this common thread of uniqueness or distinctiveness found in *McRO*, *CardioNet*, and *Thales* is missing from Claim 1 of the ’468 Patent, which merely employs generic computers and equations to automate the abstract idea of controlling the position of a marine vessel by braking when the vessel is near an object.

Fourth, plaintiff notes that the specification—not Claim 1—of the ’468 Patent provides specific equations and formulae used by Claim 1 of the ’468 Patent to calculate braking thrust to counter the momentum of a vessel. Yet contrary to plaintiff’s argument, the “equations and formulae” described in the patent specification are not specific; they are general “geometric relationships” calculating thrust based on standard sine and cosine functions. ’468 Patent, col. 11, ll. 20-24. The provision of such generic equations falls far short of rendering an idea non-abstract because, as the Federal Circuit has noted, “mathematical algorithms for performing

calculations, without more, are patent ineligible under § 101.” *In re Bd. of Trs. of Leland Stan. Junior Univ.*, 991 F.3d 1245, 1250 (Fed. Cir. 2021) (holding that the mathematical techniques of building a data structure and then repeatedly randomly modifying parameters to determine a missing value were generic techniques not eligible for patent protection). Thus, even accepting as true that the geometric equations in the ’468 specification are not, as plaintiff claims, used by human vessel captains when applying a braking force to a vessel, these generic mathematical equations do not rescue from abstraction the idea to which Claim 1 of the ’468 Patent is directed, namely, controlling the position of a marine vessel by braking when the vessel is near an object. In any event, these formulae are not found in Claim 1 of the ’468 Patent; they are referenced only in the specification. In sum, plaintiff’s arguments that Claim 1 of the ’468 Patent is not directed to an abstract idea are unpersuasive.

Nor does Claim 1 of the ’468 Patent contain any inventive concept that serves to “transform the nature of the claim” into patent-eligible subject matter as required by *Alice*. 573 U.S. at 217. Again, the only material difference between the abstract idea and Claim 1 of the ’468 Patent is the addition of a prior-art computer module using generic calculations. This is insufficient to provide the requisite inventive concept for purposes of step two of the *Alice* inquiry because “relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.” *OIP Techs., Inc.*, 788 F.3d at 1363 (holding that a patent claiming an offer-based pricing method was invalid because it merely relied on a computer to perform a generic task usually performed by humans). Thus, Claim 1 of the ’468 Patent fails to pass muster under *Alice* step two.

In opposition to this conclusion, plaintiff contends that Claim 1 of the ’468 Patent contains an inventive concept because (i) its practical application allows the marine vessel to

stop at the target location with improved efficiency, and (ii) the configuration of the “location sensor,” “speed sensor,” “direction sensor,” “rotation sensor,” and “control module” is inventive because no prior art uses the same configuration. Pl.’s Supp. Opp’n at 9. Neither of these two reasons is sufficient to supply the requisite inventive concept.

First, although Claim 1 of the ’468 Patent may allow the marine vessel to stop at the target location with improved efficiency, this improvement in efficiency is “inherent with applying the abstract idea on a computer” and thus cannot supply the requisite inventive concept for patentability. *Intellectual Ventures I LLC*, 792 F.3d at 1367. And merely configuring “generic computers” to “supplant and enhance” an “otherwise abstract manual process is precisely the sort of invention that the *Alice* Court deemed ineligible for patenting.” *Credit Acceptance Corp.*, 859 F.3d at 1056-57. Claim 1 of the ’468 Patent fits this description precisely; it merely uses generic computers to supplant and enhance an otherwise abstract manual process and thus is ineligible for patenting.

Second, plaintiff argues that there is an inventive arrangement to the placement of the various sensors, providing the necessary inventive concept to render the claim patentable. In this respect, plaintiff points to *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) and *Amdocs (Israel) Limited*, 841 F.3d 1288. But those cases are inapposite and do not rescue Claim 1 of the ’468 Patent. To be sure, *BASCOM* and *Amdocs* note that “an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *BASCOM*, 827 F.3d at 1351; *see also Amdocs*, 841 F.3d at 1298-99. But more is required than is present in Claim 1 of the ’468 Patent. In *BASCOM*, the Federal Circuit found an inventive concept where the patent provided for “the installation of [a generic device] at a specific location.” 827 F.3d at 1350 (emphasis added) (noting that an invention

which filtered websites, allowing employers to prevent employees from viewing certain types of material, was patent-eligible because the filtering tool was located at a specific location remote from the end-users). And in *Amdocs*, the inventive concept was supplied by “generic components operat[ing] in an unconventional manner.” 841 F.3d at 1300-01. Although Claim 1 of the ’468 Patent uses various sensors, it provides no “non-conventional and non-generic arrangement” of those sensors. *See BASCOM*, 827 F.3d at 1351. Simply listing various generic elements, as Claim 1 of the ’468 Patent does, is not enough. And nothing about the claim indicates that the sensors “operate in an unconventional manner.” *Amdocs*, 841 F.3d at 1300-01.<sup>11</sup>

Accordingly, there is no inventive concept sufficient to “transform the nature of the claim” which is directed to an abstract idea into patent-eligible subject matter. Thus, Claim 1 of the ’468 Patent fails the second *Alice* step in addition to the first, and the Motion to Dismiss must be granted with regard to Claim 1 of the ’468 Patent.

#### E. The ’073 Patent

Claim 1 of the ’073 Patent is directed to the abstract idea of maintaining a marine vessel at a target global position and a target heading in a body of water by monitoring external roughness conditions. In the words of Claim 1 of the ’073 Patent, Claim 1 is a “method for maintaining a marine vessel at a target global position and a target hearing in a body of water” with one necessary step being “estimating roughness conditions of the body of water.” ’073 Patent, col. 15, ll. 25-33.

Maintaining a marine vessel at a target global position and a target heading by monitoring external roughness conditions is plainly an abstract idea. Vessel operators have been doing this

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<sup>11</sup> For the same reasons discussed *supra*, plaintiff’s contention that defendant’s marketing materials tout the benefits of the invention is irrelevant.

for millennia. Indeed, prior art cited on the face of the '073 Patent confirms that humans have long been able to maintain a marine vessel at a target location accounting for roughness conditions, specifically by “turn[ing] the bow into oncoming waves to reduce the risk of damage and the possibility of capsizing.” U.S. Patent No. 4,769,773, col 1, ll. 22-25.<sup>12</sup> And in any event, it is obvious and therefore proper for judicial notice pursuant to Rule 201, Fed. R. Civ. P., that vessel operators consider roughness conditions to maintain a vessel at a location. Thus, Claim 1 of the '073 Patent is plainly directed to an abstract idea long practiced by mariners.

In an attempt to avoid this conclusion, plaintiff argues that adding the words “technological improvements” and “control module” to this abstract idea somehow negates the abstractness of the concept of maintaining a target position by monitoring external roughness conditions. This argument fails; “technological improvements” and “control module” are not magical words that can eliminate the abstractness of Claim 1. Claim 1 of the '073 Patent may offer the sort of “improved speed or efficiency inherent” in using a computer to accomplish an abstract idea, but such improvements cannot render patent-eligible an otherwise abstract idea. *Intellectual Ventures I LLC*, 792 F.3d at 1367. Nor does reference to a control module lead to a different result: the Federal Circuit has held that “automation” using “existing technology”—such as a control module—does not save a claim from targeting an abstract concept because “the automation of [a] conventional human process to make it more efficient is itself an abstract idea.” *Repifi Vendor Logistics, Inc.*, 2022 WL 794981, at \*2. In other words, merely configuring “generic computers” to “supplant and enhance” an “otherwise abstract manual process is precisely the sort of invention that the *Alice* Court deemed ineligible for patenting.” *Credit Acceptance Corp.*, 859 F.3d at 1056-57.

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<sup>12</sup> U.S. Patent No. 4,769,773 is cited on the face of the '073 Patent. See '073 Patent, References Cited.

Plaintiff offers two other arguments that Claim 1 of the '073 Patent is not directed to an abstract idea, but neither of those arguments is persuasive. First, plaintiff argues again that Claim 1 of the '073 Patent is similar to the claims found patentable in *Jaguar Land Rover Ltd.* because Claim 1 operates various subsystems of a vessel. But, as discussed *supra*, *Jaguar Land Rover Ltd.* does not stand for such a broad proposition. Indeed, *Jaguar Land Rover Ltd.* made clear that the invention there-at-issue did “not computerize what humans would otherwise do” because, for example, it changed the wheel spin of the vehicle and adjusted the vehicle’s suspension, two tasks which humans are not able to do in the ordinary course of driving. 388 F. Supp. 3d at 680. In contrast to the claims at the heart of *Jaguar Land Rover Ltd.*, Claim 1 of the '073 Patent works precisely to computerize what humans would otherwise do, namely, to maintain a marine vessel at a target location by monitoring external roughness conditions.

Second, plaintiff identifies two Federal Circuit decisions that plaintiff contends support a finding of non-abstractness for Claim 1 of the '073 Patent. For one, Plaintiff relies on *Thales* which held that a patent was not directed to an abstract idea because the claims specified “a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately [sic] calculate the position and orientation of an object on a moving platform.” *Id.* at 1349. But missing here is any unconventional configuration of sensors or any other unconventional element that could confer patent-eligibility. Next, plaintiff relies on *CardioNet* to argue that, because vessel captains cannot perceive precise attitude measurements or calculate movements in the same way Claim 1 of the '073 Patent does, the patent does not claim an abstract idea. But although *CardioNet* held that “techniques” not “previously employed” by humans may be patent-eligible, nothing in *CardioNet* held that increased *precision or efficiency* resulting from computer implementation of otherwise abstract ideas renders an

invention patent-eligible. This crucial difference between novel techniques and increased efficiencies is evident in the '073 Patent itself, which automates a method long performed by humans, namely, maintaining a marine vessel at a target location and heading by estimating the roughness of the water. Of course, the '073 Patent may come with increased precision and efficiencies, but those are inherent in applying a computer to accomplish an abstract idea and cannot render patent-eligible the Claim. *See Intellectual Ventures I LLC*, 792 F.3d at 1367. Simply put, it matters not that vessel captains do not operate as precisely or as efficiently as computers do. The increased precision in perception and calculation is supplied wholly by the automation itself and is therefore insufficient to supply an inventive concept. Thus, plaintiff's arguments that Claim 1 of the '073 Patent is not directed to an abstract idea are unavailing.

Accordingly, because Claim 1 of the '073 Patent is directed to the abstract idea of maintaining a marine vessel at a target global position and a target heading in a body of water by monitoring external roughness conditions, *Alice* next requires consideration of whether the claim contains an “inventive concept” that serves to “transform the nature of the claim” into patent-eligible subject matter. 573 U.S. at 217. As is true for the four other patents at issue in this case, there is no inventive concept in Claim 1 of the '073 Patent because the only difference between the patent claim and the abstract idea is computer automation. Counsel for plaintiff even acknowledged in oral argument that the benefit of the '073 Patent is an “improvement in performance,” the result of computer automation. July 28, 2022 Tr. at 43:17-21.

Plaintiff, seeking to avoid this conclusion, offers several proposed inventive concepts, all of which go to the efficiency of the patent and which therefore cannot pass muster under *Alice* step two. First, plaintiff contends that “filtering an actual linear velocity of the marine vessel and an actual rotational velocity of the marine vessel” based on roughness measurements is an

inventive concept. Pl.’s Supp. Opp’n at 12-13. Simply put, plaintiff contends that the ’073 Patent calculates precise values for linear velocity and rotational velocity. Yet the fact that the ’073 Patent may perform with increased precision calculations that humans could perform cannot provide the requisite inventive concept because the Federal Circuit has said that the “improved speed or efficiency inherent with applying the abstract idea on a computer” cannot supply the requisite inventive concept. *Intellectual Ventures I LLC*, 792 F.3d at 1367.

Second, plaintiff cites to *BASCOM* and *Amdocs* without much explanation. Yet nothing in the cases plaintiff cites suggests that Claim 1 of the ’073 Patent supplies an inventive concept. To be sure, those cases note that “an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *BASCOM*, 827 F.3d at 1351; *see also Amdocs*, 841 F.3d at 1298-99. But, Claim 1 of the ’073 Patent does not supply a non-conventional or non-generic arrangement of known, conventional pieces; rather, Claim 1 of the ’073 Patent merely references a prior-art control module, contemplates several calculations based on measurements, and operates a prior-art propulsion system. There is only one piece of technology mentioned—the control module—and thus Claim 1 of the ’073 Patent is certainly lacking a “non-conventional and non-generic arrangement” of pieces. *See BASCOM*, 827 F.3d at 1351.

Accordingly, there is no inventive concept sufficient to transform Claim 1 of the ’073 Patent into patent-eligible subject matter. Claim 1 of the ’073 Patent thus fails both steps of the *Alice* analysis, and the Motion to Dismiss must be granted in this regard.

#### IV.

In summary, Claim 1 of each of the five patents at issue are all directed to abstract ideas:

- (i) Claim 1 of the ’928 Patent is directed to maintaining the position of a marine vessel at a

selected global position; (ii) Claim 1 of the '036 Patent is directed to controlling the movement of a marine vessel to remedy unintended movements caused by external effects; (iii) Claim 1 of the '232 Patent is directed to maintaining a vessel at a specific position using information from a prior position; (iv) Claim 1 of the '468 Patent is directed to controlling the position of a marine vessel by braking when the vessel is near an object; and (v) Claim 1 of the '073 Patent is directed to maintaining a marine vessel at a target global position and a target heading in a body of water by monitoring external roughness conditions. As to *Alice* step two, plaintiff has not identified any inventive concept sufficient to render these claims patent-eligible under *Alice*. At this stage, it is unnecessary to consider the validity of the other claims in each of the five patents because the Complaint focuses only on Claim 1 of each patent. As a result, defendant's Motion to Dismiss is granted.

As a final matter, plaintiff argues that, if the motion to dismiss is granted, plaintiff should be granted leave to file an amended Complaint which (1) raises additional factual issues regarding the inventive concept Claim 1 of the five patents and (2) asserts that defendant violated additional claims of the patents in suit. Plaintiff, however, has not filed a motion to amend the Complaint or provided a proposed amended Complaint. See Rule 15(a), Fed. R. Civ. P. Plaintiff's request will be considered only if plaintiff timely files such a motion.

An appropriate Order will issue.

The Clerk is directed to send a copy of this Memorandum Opinion to all counsel of record.

Alexandria, Virginia  
November 10, 2022

  
T. S. Ellis, III  
United States District Judge